

Patent Claims

16B)

- Method for producing glass-ceramic parts and/or glass parts by means of deformation of a glass-ceramic and/or glass blank, characterized in that forming is carried out using infrared radiation, where the infrared radiation is a short-wave infrared radiation from an infrared radiation source with a color temperature of more than 1500 K, especially preferably more than 2000 K and a portion of the infrared radiation acts directly and another portion acts indirectly on the glass-ceramic blank and/or glass blank where the portion of the radiation acting indirectly on the glass-ceramic blank and/or glass blank is more than 50% of the total radiation output.
- 2. Method as per claim 1, characterized in that forming is carried out in that a glass-ceramic blank is reprocessed before it is ceramized.
- 3. Method as per claim 1, characterized in that forming is carried out together with the ceramization of a glass-ceramic blank.
- 4. Method as per any of the claims 1 to 3, characterized in that the glass-ceramic blank and/or the glass blank is a glass plate.
- 5. Method as per any of the claims 1 to 4, characterized in that forming is carried out while a glass blank is being softened.

REVISED PAGE



- Method as per any of the claims 1 to 5, characterized in that forming comprises gravity lowering.
- 7. Method as per any of the claims 1 to 6, characterized in that forming comprises vacuum lowering.
- 8. Method as per any of the claims 1 to 7, characterized in that forming comprises lowering by means of a molding plug.
- 9. Method as per any of the claims 1 to 8, characterized in that forming comprises lowering by blowing.
- 10. Method as per any of the claims 1 to 9, characterized in that forming comprises a directional intrared irradiation of the glass-ceramic blank and/or glass blank to be formed.
- 11. Method as per any of the claims 1 to 10, characterized in that forming comprises the use of shields disposed between the infrared radiators and the glass or glass-ceramic blank.
- 12. Method as per any of the claims 1 to 11, characterized in that forming is carried out in an infrared radiation hollow.

REVISED PAGE



- 13. Method as per claim 12, characterized in that radiation heating is carried out by means of infrared radiators disposed in the radiation hollow.
- 14. Method as per any of the claims 1 to 13, characterized in that the glass-ceramic blank and/or glass blank is preheated.
- 15. Method as per claim 14, characterized in that the glass-ceramic blank and/or glass blank is preheated in a conventional oven.
- 16. Method as per any of the claims 1 to 15, characterized in that the glass-ceramic and/or the glass is reheated after forming.
- 17. Method as per claim 16, characterized in that the glass-ceramic and/or the glass is reheated in a conventional oven.
- 18. Device for calrying out the method as per any of the claims 1 to 17, characterized in that the device comprises:
- 18.1 an infrared radiation hollow with walls and/or ceiling and/or floor reflecting or back scattering the infrared radiation,
- 18.2 one or more infrared radiators, radiating infrared radiation with a color temperature of more than 1500 K, especially preferably more than 2000 K.
- 19. Device as per claim 18, characterized in that the reflectivity or the ability to back scatter of the walls and/or ceiling and/or floor is more than 50% of the impinging radiation.

REVISED PAGE



- 20. Device as per claim 18, characterized in that the reflectivity or the ability to back scatter of the walls and/or ceiling and/or floor is more than 90% or 95%, especially more than 98% of the impinging radiation.
- 21. Device as per any of the claims 18 to 20, characterized in that the material of the wall\and/or the ceiling and/or the floor back scatters diffusely.
- 22. Device as per any of the claims 18 to 21, characterized in that the reflecting or back scattering walls and/or ceiling and/or floor comprise one or more of the following materials:

Al₂O₃; BaF₂; BaTiO₃; CaF₂; CaTiO₃; MgO 3,5 Al₂O₃; MgO, SrF₂; SiO₂; SrTiO₃; TiO₃, Spinell, cordierite cordierite sintered glass ceramic

- 23. Device as per any of the claims 18 to 22, characterized in that the infrared radiators are cooled, especially air-cooled or water-cooled.
 - 24. Device as per any of the claims 18 to 23, characterized in that the infrared radiators are individually controllable and that their electrical output is controllable.

REVISED PAGE